

ALGÆ OF THE NEW HEBRIDES,

Christmas, 1879.

Herewith, dear Dr. Agnew, I send you a list of 23 Algæ which were examined from a small collection, made by Mr. F. Campbell, on my request, during his stay in the New Hebrides. The elaboration of these oceanic plants, the first recorded from that group, is by Dr. W. O. Sonder, who since fully 40 years has been an eminent author on this tribe of vegetation, who still makes phycology a favourite study, and who can bring an almost unrivalled experience to bear on the elucidation of seaweeds. As Dr. Sonder is an honorary member of the Tasmanian Royal Society, I have thought it but right to offer these notes of his preferentially to your journal.

Respectfully yours,

FRED. VON MUELLER.

ALGÆ OF THE NEW HEBRIDES,

COLLECTED BY F. CAMPBELL, ESQ., AND EXAMINED BY
DR. W. O. SONDER, OF HAMBURG,
Hon. Memb. Roy. Soc. Tasm.

[Read 13th April, 1880.]

1. *Turbinaria ornata*, J. Agardh. Spec. Algarum i., p. 267.
2. *Turbinaria vulgaris*, J. Ag. l.c.
3. *Sargassum gracile*, J. Ag. l.c., p. 310.
4. *Sargassum polycystum*, S. onustum, J. Ag. l.c., p. 311.
5. *Asperococcus sinuosus*, Bory. J. Ag. l.c., p. 75.
6. *Laurencia papillosa*, Grev. Syn. Alg., p. 52, forma minor, papillis brevissimus.
7. *Laurencia nidifica*, J. Ag. l.c. ii. 3, p. 749.
8. *Mastophara foliacea*, Kütz, Tab. phyc., vol. viii. t. 100.
9. *Sarcodia ciliata*, Zanardini, Phyc. Austr. nov. n. 19.
10. *Sarcodia polyclada*, Sond. spec. nova. S. fronde crassiuscula, carnosio-membranacea, a stipite brevissimo plano oblonga, margine prolifera, proliferationibus e bassi cuneata dichotomis vel irregulariter ramosis, segmentis ultimis teretiusculis simplicibus vel furcatis.
Specimen circ. 3 pollicare, discus 1 poll. longus et 3 poll. latus, segmenta ultima circ. 3-4 linearia. Fructus ignoti. Structura interna generis. Color obscure purpureus. A. S. palmata ramificatione facile distinguitur.
11. *Gracilaria lichenoides*, J. Ag. l.c., p. 588.
12. *Gelidium rigidum*, Grev., J. Ag. l.c., p. 468.
13. *Hypnea pannosa*, J. Ag. l.c., p. 453.

14. *Galaxaura rugosa*, Lamx., Kütz, tab. phyc., vol. viii. t. 33.

15. *Plocamium hamatum*, J. Ag. *Epicrisis* syst. Florid., p. 338. Frons superne densius ramosa, pinnis alterne ternis. Pinnarum infima subulato-acuminata, erecto-patula, sæpius recurvato-uncinata, dorso incrassato subdenticulata. Sporophylla in axilla fasciculata subsessilia vel secus interiorem pinnulæ marginem seriata, in pedicellis solitaria, sæpius aggregata, ovalia vel oblonga et magis minusve arcuata. Sphærosporæ duplice serie dispositæ.

16. *Centroceras clavalatum*, Montague. Flor. Alg. 140 var. *cryptacanthum*, C. *cryptacanthum*, Kütz, tab. phycal. vol. iii. t. 17.

17. *Caulerpa Novo-Ebudarum*, Sond. et Muell. C. frondibus e surculo repente teretiusculo glabro erectis filiformibus dichotomis basi compressis et margine denticulatis, mox spiræ modo intortis 3-4-fariam denticulatis, denticulis conicis mucronulatis.

Species C. serrulatæ et Freycineti affinis, tenuitate ab omnibus distincta. Frondes 3-4 pollicares, uti surculus $\frac{1}{3}$ lin. latæ. Rami erecti.

18. *Caulerpa Freycinetii*, Ag. Spec. Alg., p. 446, Kütz. tab. phyc. vol. viii. t. 4 c.

19. *Caulerpa Campbelliana*, Sond., spec. nova, C. frondibus a surculo tenui repente glabro erectis, supra stipitem teretiusculum sensim cuneato-dilatatis planis lineari-lanceolatis pinnatifidis simplicibus rarius parce dichotomis vel ex apice proliferis, lobis alternis in basi frondis remotis versus apicem approximatis erectis vel subadpressis e basi latiore longe acuminatis mucronulatis.

Frons 3 pollices alta, in parte superiore et latiore $1\frac{1}{2}$ lin. lata. Rachis $\frac{1}{2}$ lin., lobi 1 lin. longi.

Caulerpæ remotifoliæ Sond. affinis, differt fronde multo minore, tenuiore, apicem versus dilatata et lobis erectis non patentibus.

20. *Halimeda Opuntia*, Lamouroux, Kütz. tab. phyc., vol. vii., p. 21, f. 1.

21. *Valonia confervoides*, Harvey, List of Friendly Island Algæ, Bryopsis pachynema Martens. Ost. Asiat. Expedit., p. 24, tab. 4, f. 2.

22. *Cladophara anastomosans*, Harv., Phyc. Austral., tab.

101. Frons pulvinatim expansa, cæspites 2-3 pollicares.

23. *Chætomorpha Novo-Ebudica*, Sond., spec. novo. C. palidevirens, subcornea, longissima, crispula, tortuosa, $\frac{1}{4}$ lin. lata, apice non dilatata, articulis diametro æqualibus vel parum longioribus.

Simillima C. princeps, Kütz., differt filis apice dilatatis, C. torulosa, Kütz., articulis diametro duplo longioribus.